November 12, 2002

NOTICE OF DECISION

WATER POLLUTION CONTROL PERMIT
NUMBER NEV90058

Newmont Mining Corporation
Lone Tree Mine

The Nevada Division of Environmental Protection has decided to renew the Water Pollution Control Permit NEV90058 to Newmont Mining Corporation. This permit authorizes the construction, operation, and closure of approved mining facilities at the Lone Tree Mine in Humboldt County. The Division has been provided with sufficient information, in accordance with Nevada Administrative Code (NAC) 445A.350 through NAC 445A.447, to assure the Division that the groundwater quality will not be degraded by this operation and that public safety and health will be protected.

The permit will become effective November 27, 2002. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to Nevada Revised Statute (NRS) 445A.605 and NAC 445A.407. All requests for appeals must be filed by 5:00 PM, November 22, 2002, on Form 3, with the State Environmental Commission, 333 West Nye Lane, Capitol Complex, Carson City, Nevada 89706-0851. For more information, contact Alan Tinney directly at (775) 687-9414, toll free in Nevada at (800) 992-0900, extension 4670, or visit the Division website at www.state.nv.us/ndep/bmrr/bmrr01.htm.

Response to Comments

1. Comments were received by e-mail October 23, 2002 from Tom Myers, Ph.D., Director, Great Basin Mine Watch. The following responses are provided to the submitted comments.

1.1
GBMW comment: First, please provide us with an update as to the status of Newmont's rapid infiltration basins which were permitted under NEV2000507. It is our understanding that this is a temporary permit and that Newmont is not currently using the RIBs. Thank you in advance for a brief update on this issue even though it is a different permit.

NDEP Response: *While the rapid infiltration basins are not within the purview of this permit, the Bureau of Regulation and Reclamation (BMRR) understands that the infiltration basins are currently in use. Please contact the Bureau of Water Pollution Control for additional permit information.*

1.2
GBMW comment: We are concerned about the Division's Notice of Intent. It has not been posted on the web site and was only published in the Elko paper, a community ninety miles from the site. It should also be published in the Winneumucca and Battle Mountain papers. These are the communities most affected by the Lone Tree operation.

NDEP response: *The Notice of Proposed Action for this Lone Tree Mine Permit renewal was properly published in the Humboldt Sun (Winnemucca) newspaper on September 6, 2002. It was also posted on the Nevada Division of Environmental Protection's (NDEP) web site on September 25, 2002. It should be noted that the posting of public notices on the Division's web site has been established as an additional effort to conveniently provide the public notice information, but that such postings are not specifically stipulated by Nevada Administrative Code 445A.402.*

1.3
GBMW comment: The existing monitoring wells do not show much current contamination. In part, this is likely because of the dewatering that has lowered groundwater hundreds of feet below its premine level. Due to current leaks and activities at the mine, we do not believe that this mine will not degrade the groundwater in the future when levels recover. The fact sheet mentions that premine levels were as little as 20 feet below the surface. While the pit lake will evaporate much water, which will cause a permanent drawdown, it is still likely that the groundwater will recover to within 200 feet of the surface. For this reason, NDEP should consider whether contaminants will reach this level, not the current drawndown level, when issuing permits.

NDEP response: *The Schedule of compliance item placed in Section I.B of the renewed permit requires the submittal of an updated Pit Lake Plan with the express purpose to identify the anticipated groundwater recovery levels and to address any related impacts.*

1.4

GBMW comment: The schedule of compliance includes the preparation of two documents that should have been prepared and reviewed before the permit is renewed.

The schedule of compliance requires Newmont to submit an updated Heap Leach and Tailings Impoundment Facilities Operation Plan within 60 days. As will be discussed below, leakage from the Section 23 tailings impoundment is one of the major issues concerning this permit. The public should have the right to review this document during the public review process to see how the tailings leakage has been handled. NDEP should review these plans before it has confidence to issue the permit renewal. The heap leach portion of this study should include a plan for heap closure and NDEP should not renew the permit until Newmont provides such a plan.

The compliance schedule also requires Newmont to submit an update of the *Pit Lake Optimization Plan* within 30 days. Because the backfill of the pit with sulfidic material represents one of the two major threats to the groundwater quality, it is essential that the public be able to review this within the formal review period.

Failure to provide the public with an opportunity to comment on these documents violates NDEP's statutory duty to providde the public with an opportunity to comment before it issues a water pollution control permit. See NRS 445A.590.

NDEP response: *The two mentioned documents are required to be submitted to the NDEP in accordance with the Schedule of Compliance provided in Section I.B. of the renewed permit. Upon receipt by the Division, the submitted documents will be available for public review and comment.*

1.5

GBMW comment: The tailings dam has two known seeps. This permit should not be renewed without a plan to remediate the soils around the tailings. This impoundment should be permanently closed rather than expanded.

NDEP response: *NDEP required the submittal and review of the Design of Seepage Control Measures for the Section 23 Tailings Impoundment prior to the approval of the Stage 8 though11tailings impoundment expansion.*

1.6

GBMW comment: The Fact Sheet prepared for this renewal did not mention the leaky tailings facility. This would appear to violate NAC445A.401 specifying the contents of the fact sheet.

NDEP Response: *The fact sheet has been revised to reference the two seeps that have been identified stemming from the toe of the dam of the Section 23 Tailings Impoundment and the corrective measures implemented.*

1.7

GBMW comment: The liner was designed to have a conductivity of 1 x 10^{-6} cm/s, which is slightly more than 1 foot per year. In other words, if the liner contains flow that ponds a little more than a foot (to provide a gradient of 1/1), it will take less than a year for leakage to reach the soils beneath the impoundment. The standard of 1 x 10^{-6} cm/s is insufficient and should be decreased by a factor of 10 to 1 x 10^{-7} cm/s.

NDEP Response: *The permeability of 1x10-6 cm/sec is in compliance with Nevada Administrative Code (NAC) 445A.43 (1) (a), which requires tailings impoundments to utilize a system of containment equivalent to twelve inches of recompacted native, imported, or amended soils which have an in place recompacted coefficient of permeability of no more that 1x10-6 cm/sec.*

1.8

GBMW comment: Also, how does NDEP verify that certain permeabilities are reached. The Golder Seepage Report states that it was compacted to this conductivity, but does not describe the tests performed to verify that.[1] Please provide a description of the tests and where the tests results are filed so that we can verify the numbers. This is especially important because Golder identified the integrity of the liner as the most likely sources of the leak. They also mentioned that ponding from backed-up drains could be seeping through the liner[2].

NDEP Response: *Permeability results are verified through the review of the quality assurance/quality control documents submitted to the Division upon completion of each project. The permeability rates are determined through laboratory testing in accordance with ASTM standard D5084. ASTM standard D5084 of the Standard Test Methods is the Measurement of Hydraulic Conductivity of Saturated Porous Material Using Flexible wall permeameter. In the Golder Design of Seepage Control Measures for the Section 23 Tailings Impoundment states that the potential seepage from the completely or partially blocked subdrain pipe is considered to have a low probability of contributing to the seepage.*

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[1] Golder Seepage Report, page 3.

[2] Golder Seepage Report, page 9.

1.9

GBMW comment: Unfortunately, Golder recommended, and apparently NDEP has accepted, a containment system that consists of an unlined ditch around parts of the impoundment. This may capture water that is moving laterally, but there is no way to determine whether seepage may be moving vertically downward. The monitoring wells will detect contamination only after it has reached the water table, a constantly moving target because of dewatering, and moved laterally to the wells. By the time any contamination has been detected, hundreds of thousands of gallons of tailings water will have been released to the unsaturated zone.

NDEP Response: *The Golder report, Design of Seepage Control Measures for the Section 23 Tailings Impoundment states that the typical trench used for both the east and west seeps was lined with an impermeable Geosynthetic Clay Liner on the base and downstream side of the trench. It also states that no seepage water was observed with depth in the foundation soils where the seepage expressed itself at the exterior toe of the dam. Review of the third quarter 2002 report indicates that the total volume pumped from the seep collection since initiation in 2001, is 4,480 gallons for the west seep and 1,074 gallons for the east seep. It also stated the that the year-to-date gallons pumped from the seep collection in 2002 is 1,858 gallons for the west seep and 69 gallons for the east seep.*

1.10

GBMW comment: This seepage indicates that this tailings impoundment should be removed from operation and dried so that the seepage will be eliminated. Instead, the fact sheet indicates that NDEP approved a minor modification to allow Newmont to add four more stages to the Section 23 tailings. This was an increase from 17 to 28 million tons of tailings.[3] It is unacceptable that, with the observed and documented leaks, NDEP allowed this expansion of the tailings without public input (since a minor modification does not require public input). The definition of a minor modification does include phased expansions of a tailings impoundment (see NAC445a.416(4)(a)), but NAC 445a.416(3) does not allow for a modification to be considered minor if it will "result in an increased potential for the facility to degrade waters of the state". NDEP's approval of stages 8 through 11 did increase the potential for the facility to degrade waters of the state because it is already leaking and the increased height of the tailings will increase the potential head on the liner, increasing the potential for water to seep out. As a result, NDEP should have at least treated the expansion as a major modification.

NDEP Response: *The type of permit modification is determined by the scope and nature of the proposed modification. Tailings impoundment expansions that consist of additions within the original footprint have been typically determined as "minor"*

[3] Golder Associates, Inc., 2002. Design Report: Section 23 Tailinghs Impoundment Facility, Stages 8 Through 11 Expansion, Lone Tree Mine. Prepared for Newmont Mining Corporation. January 8, 2002. Hereinafter Golder Design Report. Page 1.

modifications. The public may comment on any submitted plan or document. The most recent trend graph provided in the 2002 third quarter report depicting the average accumulation of the seepage collection systems shows that the west seep flow has consistently reduced from the 3rd quarter of 2001 through the 3rd quarter of 2002 and likewise that the east seep has consistently been below 1 gallon per day except for the 4th quarter of 2001 where it was 1.67 gallons per day.

1.11

GBMW comment: In examining the seepage problem, Golder failed to consider whether the rate that tailings are added to the impoundment could have affected the seepage. "The filling rate of tailings has increased from the originally-designed rate of 2,500 tons per day (tpd) to a current rate of 8,500 tpd."[4] Rapid changes in the head on the liner could have added to the seepage. NDEP should consider this.

NDEP Response: *In the Golder Design of Seepage Control Measures for the Section 23 Tailings Impoundment, it states that the construction of the planned stages 8 through 11 will have negligible effect on observed seepage rates. The current rate was approved through the approval of the planned stages of 8 through 11. As stated above, the most recent trend graph provided in the 2002 third quarter report depicting the average accumulation of the seepage collection systems shows that the west seep flow has consistently reduced from the 3rd quarter of 2001 through the 3rd quarter of 2002 and likewise that the east seep has consistently been below 1 gallon per day except for the 4th quarter of 2001 where it was 1.67 gallons per day.*

1.12

GBMW comment: Also, there should be a limit in the permit specifying the rate that tailings should be added to the impoundment. As this is a major feature of the permit, it is not acceptable to wait for the provision of some compliance document.

NDEP Response: *Tailings placement is limited to that of the submitted design documents as approved by NDEP. As such, NDEP has typically not placed a specific filling rate limitation directly into the permit, but rather that the operation must be in accordance with approved plans.*

1.13

GBMW comment: Also, Golder, in their design report, states that "seepage flows along the base of the dam to the exterior toe above the contact between the relatively coarse-grained dam fill and the underlying fine-grained surficial foundation soils."[5] Their reference for this is their seepage report, but such a conclusion was not found in that report. Rather, the report contained speculation that flow would move along the contact between the liner and the underlying soil and there was reference to low

[4] Golder Design Report, page 5.

[5] Golder Design Report, page 7.

permeability bedrock material, but provided no observations or proof to back up this assertion. It is inappropriate to make statements with a reference that never provided the proof one is referencing, especially when Newmont, Golder and the NDEP are relying on the assumption to justify the expansion of the tailings impoundment.

NDEP Response: *The Golder's Design of Seepage Control Measures for the Section 23 Tailings Impoundment stated that the field investigation confirmed that water passing through the liner on the upstream slope of the dam appears to be flowing out from under the toe of the dam on top of the contact between the rock fill dam and the lower-permeability subgrade foundation soils at both seep locations. It goes on to state that no seepage water was observed with depth in the foundation soils where the seepage expressed itself at the exterior toe of the dam.*

1.14
GBMW comment: GBMW also has the following specific comments and questions concerning the tailings.

Why is there a reduction in monitoring for the tailings facility from the existing permit, when the facility now has seepage from both the east and west embankment toes. The development of seepage from the facility should trigger additional monitoring.

NDEP Response: *Actually the monitoring was increased during this permit renewal. Many of the frequencies for monitoring of the tailing facility were increased from annually to quarterly. However, the permit renewal will be revised in the monitoring requirements as follows:*

- *Section D.14 – Change the Parameter to read "Average Daily Accumulation".*
- *Add - Section D.15 – Tailings Dam Seepage Collection System – parameter of Profile I – Frequency of quarterly.*
- *Section D.11 – Change the Parameter to add ANP/AGP.*

1.15
GBMW comment: What is the current accumulated volume in the seepage collection systems? Has it increased or decreased? The permit should address a compliance schedule should the gpd increase to a certain volume. Constituents should be included in the monitoring, not just volume.

NDEP Response: *The accumulated volumes for east and west seeps were provided above. The average daily accumulation in gallons per day for the west seep has consistently decreased since the third quarter of 2001. The permit includes a schedule of compliance item that requires submittal of the tailings impoundment facilities operation plan that should address the volumes of the seepage collection. The permit will be revised to include a Profile I analysis for the tailings dam seepage collection system as described above. Additionally, the Golder Design of Seepage Control Measures for the Section 23 Tailings Impoundment includes a monitoring plan with notification of the Golder Associates engineer if one of the sumps exceeds 2 gallons per minute.*

1.16

GBMW comment: What kind of monitoring is in place to verify that all the seepage is being collected? A compliance schedule should be included for the development and implementation of a tailings management plan to reduce or eliminate seepage. This should include a water balance that will limit the size of the supernatant, and a tailings distribution that prevents supernatant from being in direct contact with the embankment.

NDEP Response: *The permit renewal requires that the average daily accumulation of the seepage collection system be monitored on a weekly basis. The Golder Design of Seepage Control Measures for the Section 23 Tailings Impoundment states that no seepage water was observed at depth in the foundation soils where the seepage expresses itself at the exterior toe of the dam. The report also states that the dam will be constructed in pool areas using 3 feet of freeboard in addition to an average supernatant pool of 3 feet. Also the tailings are deposited in the impoundment using subaerial methods. A Schedule of Compliance item is included with this renewal for the submittal of an updated tailings impoundment facility operation plan.*

1.17

GBMW comment: What is the WAD CN limit for the supernatant and how often is that verified?

NDEP Response: There is not a WAD cyanide limit stipulated in the NDEP permit. The Nevada Division of Wildlife requires WAD cyanide in the supernatant pond be kept at a non-lethal level. Also, Newmont standard operating procedures requires levels of WAD cyanide in the supernatant pond be kept below 50 parts per million (ppm). The WAD cyanide results, as provided in the January 28, 2002 annual report, for the supernatant pond are as follows:

- *1st quarter 1998 – 20.8mg/l*
- *1st quarter 1999 – 24.1mg/l*
- *1st quarter 2000 – 47.4mg/l*
- *1st quarter 2002 – 25.3mg/l*

The renewed WPC permit requires that a Profile II be taken quarterly at the supernatant pond.

1.18

GBMW comment: How is it possible to manage the hydraulic head in the tailings mass? The embankment? This needs to be accomplished by strict limits on the extent and depth of the supernatant pond, and by the placement of tailings within the embankment.

NDEP Response: *The permit includes a Schedule of Compliance requirement for submittal of an updated Tailing Impoundment Facilities Operation Plan. The Golder Design of Seepage Control Measures for the Section 23 Tailings Impoundment document,*

states that the dam will be constructed in pool areas using 3 feet of freeboard in addition to an average supernatant pool limit of 3 feet. If the tailings are sufficiently dewatered, which is the primary objective of subaerial tailings deposition, hydraulic head pressure on the liner should be minimal.

1.19
GBMW comment: NDEP should not allow Newmont to backfill the pit with sulfidic waste rock… …It is essential that Newmont provide a contingency plan for preventing the degradation, not just merely monitor the waters and then come up with a plan if a problem is found. Ultimately, no plan to place sulfidic waste rock into the pit lake will "result in the best pit lake water quality practicable".[6]

NDEP Response: *The Schedule of compliance item placed in Section I.B of the renewed permit requires the submittal of an updated Pit Lake Plan with the express purpose to identify the anticipated groundwater recovery levels and to address any related impacts.*

1.20.A
GBMW comment: Also, in the same letter that Newmont claims to want the best pit lake water, they stated that they do not need an amendment to the plan from the BLM. "BLM has
determined that no amendment to the Plan of Operations is required for implementation of the Pit Lake Optimization Plan."[7] This is not true according to individuals at the BLM in Winnemucca. We recommend that NDEP request documentation from Newmont that such a plan is not required.

NDEP Response: *A copy of the received comments has been provided to BLM for a determination in this matter.*

1.20.B
GBMW comment: Finally, in the same letter, Newmont promised to place oxide materials in the pit. "Initially, oxide waste materials will be selectively placed in the southern portions of the mine pit."[8] It is curious that Newmont has emphasized the oxide waste in their correspondence.

NDEP Response: *The Scoping Document for the Pit Lake Optimization Plan describes that the strategic placement of waste material in the southern end of the pit, which will*

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[6] Letter from Jeff White, Manager - Environmental Surfaces, Newmont Mining Corporation, to Dave Gaskin, NDEP, dated May 3, 2002.

[7] Id.

[8] Id.

then be covered with oxide material. Essentially, sulfide rock whether exposed pit wall or strategic placed waste rock, will all be covered by oxide materials.

1.21

GBMW comment: The stated objective of backfilling the pit is to provide "a means to optimize the lake chemistry through isolation of potentially reactive pit wall material"[9]. If that were the goal, we would support the plan. To achieve this goal, only oxide or net acid neutralizing rock should be backfilled near potentially acid producing pit walls. This would help to neutralize the acid draining into the lake. Under no circumstances can the backfill of potentially acid generating rock be approved. NDEP must recognize the necessity of maintaining the pit as a sink. NDEP should recognize that the 20 feet that the Lone Tree pit lake is predicted to be below the preexisting groundwater level is very small and probably will not guarantee the pit will be a terminal sink

NDEP Response: *Comments noted. The Scoping Document for the Pit Lake Optimization Plan describes that the strategic placement of waste material in the southern end of the pit will be used as a means to optimize the lake chemistry through isolation of potentially reactive material. Again the Schedule of compliance item placed in Section I.B of the renewed permit requires the submittal of an updated Pit Lake Plan with the express purpose to identify the anticipated groundwater recovery levels and to address any related impacts.*

1.22

GBMW comment: Another issue that NDEP must examine regarding the pit lake water balance is whether the pit is a sink year round or just seasonally. Because the pit lake will only be about 20 feet below the level of the preexisting groundwater, during the low evaporation months, the pit lake could raise to the point where contaminated pit water will flow into the surrounding aquifers. It is not acceptable to degrade these groundwaters, even if it just seasonal.

NDEP Response: *NEDP expects that this information will be contained within the Pit Lake Optimization Plan as required by the Schedule of Compliance item I.B.2.*

1.23

GBMW comment: The pit lake optimization plan calls for a detailed study of the pit lake hydrology and chemistry. We support the plan because it calls for many things that we have been requesting (and arguing for) for years. For example, the model will consider groundwater inflow from each hydrologic unit and the chemistry associated

[9] Water Management Consultants, Inc., 2001. Lone Tree Mine: Scoping document for the Pit Lake Optimization Plan. Prepared for Newmont Mining Corporation. Hereinafter Pit Lake Optimization Plan. Page 2.

with each unit[10]. It will also assess uncertainty by representing "physical and chemical parameters... as stochastic variables"[11]

This will be a major study. Because it will affect the water quality of this mine throughout the post closure period, it must be reviewed before NDEP issues the permit. Therefore, we formally request that NDEP delay issuing the final permit renewal until Newmont completes this study. Because the permit requires Newmont to submit this report within 30 days, the delay will not be significant.

NDEP Response: *The BMRR recognizes the importance of the pit lake study and resulting plans as evidenced by the fact that it has been included as a Schedule of Compliance item in the renewed permit. Please note that submittal of the updated plan is required within 30days of the effective date of the renewed permit. As such, the NDEP has determined to proceed with the permit renewal per the prescribed schedule, with the expectation that upon receipt by NDEP, the plan will be available to all parties for review and comment at the earliest possible time.*

1.24
GBMW comment: There must be an updated waste rock management plan provided as a part of this permit renewal.

NDEP Response: *The Schedule of Compliance in the permit renewal includes an updated Waste Rock Management Plan.*

1.25
GBMW comment: There appears to be more sulfidic waste rock at the site than had originally been predicted. An updated waste rock management plan needs to address closure of the waste rock facilities. According to the existing waste rock management plan, there has been no segregation of material to isolate potential acid generating rock. Therefore, it should be expected that the waste rock dumps will go acidic, just as the Phase I – IV heap leach pads have. When solution daylights at the dump toes it will have to be managed as part of the fluid management system. Groundwater monitoring should be required to monitor any potential impact from the above-mentioned wasterock dumps.

NDEP Response: *The Schedule of Compliance included with this permit renewal requires the submittal of both an updated Waste Rock Management Plan and Fluid Management Plan, which should address any such concerns. Additionally, potentially acid generating waste rock is currently being encapsulated within the waste rock facilities with an outer barrier of oxide material.*

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[10] Pit Lake Optimization Plan, page 10.

[11] Pit Lake Optimization Plan, page 9.

1.26

GBMW comment: The solution ponds associated with the water treatment plant should be included as zero discharge. They are not currently covered under any permit.

NDEP Response: *The water treatment plant and associated facilities are permitted with the Bureau of Water Pollution Control.*

1.27

GBMW comment: As a final issue, I want to raise the issue of working with the BLM. Either of the two main issues raised here, the pit backfill and the increased tailings impoundment size, could be a trigger for the BLM to implement NEPA analysis. Combined with the incredibly poor predictions of the groundwater model used in the last FEIS for Lone Tree, the BLM should be doing a supplemental environmental impact statement on Lone Tree.

NDEP Response: *The Bureau of Land Management NEPA analysis is outside of the purview of this NDEP renewal.*